DOCUMENT RESUME

ED 310 878 PS 018 295

AUTHOR Czeschlik, Tatiana; Rost, Detlef H.
TITLE The Relationship of Teacher Perceptions of Children's Temperament and Intellectual Ability.
PUB DATE Apr 89
NOTE 8p.; Paper presented at the Biennial Meeting of the Society for Research in Child Development (Kansas City, MO, April 27-30, 1989).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Academic Ability; Foreign Countries; *Gifted; Grade 3; *Personality; Primary Education; *Teacher Attitudes
IDENTIFIERS West Germany

ABSTRACT

Some previous findings support the notion that there is a relation between temperamental characteristics of school children and the classroom management decisions of their teachers. Teachers' perceptions of children are known to influence their classroom behavior. This study specifically explored how teachers may overestimate or underestimate the intellectual abilities and achievement levels of their pupils according to their views of the pupils' temperamental characteristics. Headteachers were asked to provide information on the temperamental characteristics, intellectual abilities, and school achievement of 40 gifted and 40 non-gifted children. From a sample of 7,300 German elementary school children in the third grade, 40 gifted students belonging to the top 2 percent of their age group in intellectual ability were identified. For each gifted child, an average matched control from the same classroom was designated. Teachers rated each child in terms of intellectual ability and school performance. They also completed Keogh's short form of the Teacher Temperament Questionnaire. Preliminary data analysis suggests a relationship between teacher estimates of intellectual ability and school marks and two temperament factors: social flexibility and task orientation. Results are discussed in terms of their implications for elementary school children's academic and social development in the school setting. (RH)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED310878

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
X This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

THE RELATIONSHIP OF TEACHER PERCEPTIONS OF CHILDREN'S TEMPERAMENT AND INTELLECTUAL ABILITY

TATIANA CZESCHLIK & DETLEF. H. ROST

Department of Psychology, University of Marburg, West Germany

PS 018695

Poster presented at the 1989 SRCD Convention, Kansas City, Missouri, April 27 - 30.

Please send comments to:
Tatiana Czeschlik
Department of Psychology
University of Marburg
Gutenbergstrasse 18
D- 3550 MARBURG
GERMANY (FRG)

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
Tatiana Czeschlik
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

BEST COPY AVAILABLE

ABSTRACT

Some previous findings support the notion that there is a relation between temperamental characteristics of school children and the classroom management decisions of their teachers. Teachers' perceptions of children are known to influence their classroom behavior. In this study, headteachers were asked to provide information on the temperamental characteristics, intellectual abilities, and school-achievement of forty gifted and forty non-gifted children. From a very large sample of German elementary school children (grade 3; n= 7 300) forty gifted students, belonging to the top 2% of their age group in intellectual ability (assessed by means of an intelligence test battery) were identified. For each gifted child, an average matched control from the same classroom was designated. Teachers rated each child in terms of intellectual ability and school performance. They also completed Keogh's short form of the Teacher Temperament Questionnaire (Thomas & Chess 1977). Preliminary data analysis suggests a relationship between two temperament factors and teacher estimates of intellectual ability and school marks. Results are discussed in terms of their implications for elementary-school children's academic and social development in the school setting.

INTRODUCTION

Some findings support the notion that there is a relationship between the temperamental characteristics of school children and their teacher's perception of their intellectual and scholastic abilities (Gordon & Thomas 1967; Pullis & Cadwell 1982; Martin 1988). A relationship of this kind would imply that teachers do not consider only the intellectuasl capacities of their pupils when evaluating their abilities and achievement level.
Pullis and Cadwell (1982) conducted a study to determine teacher's sensitivity to individual differences in children's temperament. Their most important finding documented "the strong and consistent relationship between the students' temperamental characteristics and teacher's classroom decisions." (1982, 165). The study reported here explored how teachers may over- or underestimate the intellectual abilities and achievement levels of their pupils depending on their temperament characteristics.

SAMPLE & METHODS

SUBJECTS

A subsample of a current ongoing German research project on gifted children ("Life Environmental Analysis of Gifted Elementary-School Children", Director: Prof. Dr. D.H. Rost, University of Marburg) participated in this study.

Gifted children
More than 7.000 elementary-school children (grade 3; average age: 9 years) from schools located all over Germany, ranging from very small rural to large city schools, were tested with following instruments:

* CFT20 (Cattell & Weiss)
* Zahlen-Verbindungs-Test (Oswald & Roth;a number connecting test measuring speed of information processing)
* Verbal Analogies

The scores were factor-analysed (PCA), and the 150 children with the highest "g" (general factor) score were selected. They belong to the top 2% of their age-group in intellectual ability.

Gifted subsample: the first 40 gifted children to be selected (30 boys, 10 girls) 10 years old.

Control group: 40 non-gifted (30 boys, 10 girls), 10 years old. Each gifted child was matched with a classmate with average intellectual abilities, of the same gender, and same socioeconomic background.

Teachers: Headteachers of the gifted and non-gifted children. They had been teaching the children they rated for at least 2 years, in some cases for 4 years.

INSTRUMENTS

Teacher Temperament Questionnaire (Short Form of the Teacher Temperament Questionnaire (Thomas & Chess 1977, by Keogh, Pullis, & Cadwell, 1982; German translation by T. Czeschlik). This questionnaire comprises 23 items belonging to 3 factors: Task Orientation, Personal-Social Flexibility, and Reactivity. The 8 items belonging to each of the 3 dimensions were summed, providing a single score for each factor.

Teacher ratings of intellectual abilities. Headteachers rated on a 7-point scale each child on the expected achievement level on each of the 3 tests assessing intellectual ability. An average of the 3 scores was computed (best attainable score: $\bar{x} = 7$).

School marks were collected for the third grade; range 1 to 5.

(1=best possible mark). An average for school marks in the main three subjects (German, Math and Social Studies) was computed.

PROCEDURE

Teacher ratings of intellectual ability: Headteachers rated the children in the classroom, while the tests assessing intellectual ability were being administered.
(November 1987 - June 1988).
A year later, teachers completed the Short Form of the Teacher Temperament Questionnaire and a form for the school marks.
(December 1988 - June 1989).

RESULTS

Preliminary results are presented. The three temperament scales were analized separately, since their influence on teacher judgments of the intellectual ability of their pupils might be differential.
Extreme groups of the gifted and control children in each of the three temperament factors were determined: of the total subsample (n=80) the children having a value above the 75. percentile or below the 25. percentile were first selected. These gifted and control children where then assigned to one of the extreme groups. Group size in the quartiles ranges from 4 to 16. The intention of the preliminary analysis of this subsample is to be descriptive, therefore no significance tests are reported.

The mean values and standard deviations in intelligence and school marks of the 4 groups for the 3 temperament factors are presented.

Table 1: Temperament factor: Task Orientation

		Intelligence	School mark
>75.percentile	gifted (n=9)	6.5 .4	1.4 .2
	non-gifted (n=5)	5.8 .9	1.6 .4
<25.percentile	gifted (n=7)	5.3 1.2	2.2 1.0
	non-gifted (n=16)	4.7 .9	2.4 .6

Table 2: Temperament factor: Reactivity

		Intelligence	School mark
>75.percentile	gifted (n=10)	6.6 .3	1.5 .3
	non-gifted (n=6)	4.9 .7	2.2 .8
<25.percentile	gifted (n=8)	6.3 .3	1.5 .3
	non-gifted (n=12)	4.7 .9	2.3 .7

Table 3: Temperament factor: Personal-Social Flexibility

		Intelligence	School mark
>75.percentile	gifted (n=9)	6.6 1.5	1.4 .3
	non-gifted (n=4)	4.7 .5	1.9 .2
<25.percentile	gifted (n=5)	6.0 .7	1.8 .3
	non-gifted (n=14)	4.5 .6	2.4 .4

DISCUSSION

The effects of the three temperament factors "Task Orientation", "Personal-Social Flexibility" and "Reactivity" (Keogh, Pullis & Cadwell, 1982) on teacher's ratings of intellectual abilities and on school marks were examined. Forty gifted third-grade elementary-school children and forty matched controls were compared on each of the temperament factors.

Inspection of data reveals interesting differences in one or two of the temperament factors. Reactivity (comprising items about intensity and threshold of reactions, and negative mood) doesn't seem to influence teacher's estimate of intelligence or school marks.

Personal Social Flexibility seems to have no effect on the estimates of intellectual abilities but teachers seem to consider this behavior style when evaluating their pupil's achievement levels. Gifted children scoring high on this factor receive better average grades than children of the same intellectual ability but displaying lower adaptability, more withdrawal and less positive mood. The gifted children low on this factor and the non-gifted children high on this factor have comparable school marks. This may suggest that teachers underestimate the achievement, but not the intellectual capacities, of gifted children scoring low on this factor. In contrast, they overestimate the achievement of non-gifted children high on this factor.

The largest effects can be observed on the factor Task Orientation. Non-gifted children with high values receive bettter school marks and are rated higher on intellectual abilities than the gifted pupils low on this factor. This factor seems to exert a strong influence on school marks. Gifted and non-gifted children high on this factor show little difference in their marks, whereas gifted and non-gifted with low values on the factor have lower but comparable marks. Thus, children who were able to concentrate for a period of two hours on completing intelligence tests and achieving scores which allocated them in the top 2% of their age group in intellectual achievement and being rated by their teachers as lacking task orientated behavior, seem to be underestimated by their teachers.

These preliminary results suggest that further studies in the area of teacher perceptions of their pupil's temperament might contribute to understanding the mechanisms determining teacher's ratings of the intellectual abilities and school achievement of children. Teacher over- or underestimation of children's true abilities can have a great impact on their academic and social development (influencing, for example, children's academic self-concept).
The results of the analysis (in progress) of our full data set (150

gifted, 150 non-gifted children) might contribute to the clarification of these mechanisms. Future carefully constructed replication studies should address the issues raised here and by previous research.

REFERENCES

GORDON, E.M. & THOMAS, A. (1967). Children's behavioral style and the teacher's appraisal of their intelligence. Journal of School Psychology 5, 292-300.

KEOGH, B., PULLIS, M. & CADWELL, J. (1982). A short form of the Teacher Temperament Questionnaire. Journal of Educational Measurement 19, 323-329.

MARTIN, R.P. (1988). Child temperament and educational outcomes. In Pellegrini A.D.(ed.), Psychological bases for early education. Wiley, 185-205.

PULLIS, M. & CADWELL, J. (1982). The influence of children's temperament characteristics on teachers' decision strategies. American Educational Research Journal 19, 165-181.

THOMAS,A. & CHESS, S. (1977). Temperament and development. New York: Brunner/Mazel.